FUJITSU

Windows®. Life without Walls™.
Fujitsu recommends Windows 7.

Data Sheet
Fujitsu ESPRIMO P5645 E-Star5 Desktop PC

Your expandable workhorse

ESPRIMO P5645 E-Star5

The ESPRIMO P5645 E-Star5 is equipped with the latest AMD technology and offers extraordinary performance. With the powerful six-core processor from AMD this system reaches new performance levels enabling fast and easy handling of challenging tasks. The ESPRIMO P5645 E-Star5 offers optimal expandability due to its microtower design. This system, also equipped with an 87% efficient power supply, is very energy-efficient and meets the requirements of the new ENERGY STAR® certificate. Reduce your costs by reducing your power consumption.

Microtower
Maximum performance and optimal extendability
■ Top-quality, high-value microtower, 6 drive bays, 4 PCI/PCI express interfaces

New performance high
Fast and easy handling of challenging tasks at maximum performance
■ High-quality six-core processor with Turbo Core technology

ENERGY STAR®
Low power consumption and low costs, without any loss in performance
■ Power supply with up to 87% efficiency and enhanced power management settings
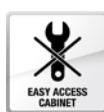
Silent operation
Pleasant working environment due to an extremely quiet system
■ Innovative hardware design, optimized cooling concept

Serviceablitiy
Easy to extend and optimal user-friendliness without any additional tools
■ Easy access to all replaceable and expandable components

Components

Processor	AMD Phenom™ II X6 1035T (6 Cores, 2.6 GHz, 9 MB)
	AMD Phenom™ II X4 945 (4 Cores, 3.0 GHz, 8 MB)
	AMD Phenom™ II X2 550 (2 Cores, 3.1 GHz, 7 MB)
	AMD Athlon™ II X2 255 (2 Cores, 3.1 GHz, 2 MB)
	AMD Athlon™ II X2 220 (2 Cores, 2.8 GHz, 1 MB)
Operating system	
Operating system	Genuine Windows® 7 Home Basic (EM) 32-bit
	Genuine Windows® 7 Home Premium 64-bit
	Genuine Windows® 7 Professional 32-bit
	Genuine Windows® 7 Professional 64-bit
Operating system compatible	openSUSE Linux
	Genuine Windows Vista®
	Genuine Windows® XP
Operating system notes	Microsoft Office 2010 preloaded. Purchase a Product Key to activate a full Microsoft Office 2010 suite.
	Limited Windows XP support. Microsoft discontinued Windows XP certification on system level.
Memory modules	2 GB (1 module(s) 2 GB) DDR3, unbuffered, non-ECC, 1333 MHz, PC3-10600, DIMM
	4 GB (1 module(s) 4 GB) DDR3, unbuffered, non-ECC, 1333 MHz, PC3-10600, DIMM
Hard disk drives (internal)	SSD SATA, 128 GB, 2.5-inch
	SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T. business critical
	SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 320 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 250 GB, 3.5-inch, S.M.A.R.T.
	SATA II, 7200 rpm, 160 GB, 2.5-inch, S.M.A.R.T.
	Supporting NCQ and 3 GBit
Graphics add on cards (optional)	NVIDIA® Quadro® NVS 300, 512 MB
	NVIDIA® Quadro® NVS 290, 256 MB
	NVIDIA® GeForce® GT 420
	NVIDIA® GeForce® 9300GE display port low profile, 512 MB
	NVIDIA® GeForce® 9300GE, 512 MB
	NVIDIA® GeForce® 405 display port full height
	LFH59/ 2x DVI-I adapter cable
	LFH59/ 2x DP adapter cable
	DP to DVI-D (single link) Adapter Cable
	ATI Radeon® HD 5450, 512 MB
Drives (optional)	Blu-ray Disc™ Triple Writer
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 20in1, USB 2.0, 3.5-Inch
Interface add on cards/components (optional)	
	Parallel Interface
	eSATA Interface
Base unit	ESPRIMO P5645 E-Star5

Mainboard

Mainboard type	D2981
Formfactor	µBTX
Chipset	AMD 785G
Processor socket	AM3
Processor quantity maximum	1
System bus (FSB / HT / QPI)	up to 4000 MHz
Memory slots	4 DIMM (DDR3)
Supported capacity RAM (max.)	16 GB
Memory frequency	1333 MHz
Memory notes	Dual channel support. For dual channel performance, identical memory modules in each channel are necessary (minimum 2 modules).
LAN	10/100/1000 MBit/s Broadcom BCM57780
BIOS version	Phoenix 6.0
BIOS features	BIOS Flash EPROM update by software Recovery BIOS
Audio codec	Realtek ALC663
Audio features	Internal speaker supports audio playback, High Definition audio

I/O controller on board

Serial ATA total	4
thereof eSATA	1 (optional)
Controller functions	Serial ATA II NCQ and 3 GBit AHCI Raid 1/0

Interfaces

Audio: line-in	1
Audio: line-in / microphone	1
Audio: line-out	1
Front audio: microphone	1
Front audio: headphone	1
USB 2.0 total	12
USB front	2
USB rear	6
USB internal	4
VGA	1 (via DVI to VGA adaptor; included for onboard graphics only)
DisplayPort	1
DVI	1 (Dual link DVI-I)
Serial (RS-232)	1 (9pin, 16 byte FIFO, 16550 compatible)
Mouse / Keyboard (PS/2)	2
Ethernet (RJ-45)	1
Parallel	1 (optional) (25pin with EPP and ECP)
Interface Module notes	Anytime USB charge functionality

Input device / components

	Optical USB tilt wheel mouse
Input devices (optional)	Optical USB/PS2 tilt wheel mouse

Drive bays

Drive bays total	6
3.5-inch internal bays	2
3.5-inch external bays	2
5.25-inch external bays	2

Slots

PCI-Express 2.0 x16	1 x (230 mm) FlexySlot
PCI-Express 2.0 x4 (mech. x16)	1 x (230 mm) full height
PCI (32-bit / 33 MHz)	2 x (170 / 315 mm) full height

Graphics on board

Graphics brand name	ATI Radeon® HD 4200
Shared video memory	up to 2811 MB
Refresh rate 1024 x 768 (recommended / max.)	85 Hz / -
Refresh rate 1280 x 1024 (recommended / max.)	85 Hz / -
Refresh rate 1600 x 1200 (recommended / max.)	85 Hz / -
TFT resolution (VGA)	1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel
TFT resolution (DVI)	1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel 2560 x 1440 pixel 2560 x 1600 pixel
TFT resolution (DisplayPort)	1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel 2560 x 1440 pixel 2560 x 1600 pixel
Graphics features	Dual display support DirectX 10.1 HDCP support OpenGL® 2.0
Graphics notes	up to 512 MB dedicated video memory (main memory owned and locked for graphics use) Tested resolutions, depending on display type additional resolutions and frequencies possible Shared memory depending on main memory size and operating system Resolution (color depth up to 32 Bit/pixel) For TFT we recommend using 60Hz

Electrical values

Power efficiency note	power supply efficiency (at 230V; 20% / 50% / 100% load) : 85% / 87% / 85%
	0-Watt mode with hard-off switch
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Operating voltage range	90 V - 264 V
Operating line frequency range	47 Hz - 63 Hz
Max. output of single power supply	300 W
Power factor correction/active power	active
Monitor outlet	No

Power consumption

Power consumption note	See white paper Energy Consumption
Link to Energy White Paper	http://docs.ts.fujitsu.com/dl.aspx?id=03379136-b9f6-4001-9a0d-319eb452db6a

Heat dissipation

Heat dissipation notes	See white paper Energy Consumption

Noise for standard configuration (HDD, ODD, FDD)

Noise emission	According to ISO9296
Related Processors for noise	AMD® Phenom™ II X4 945
Noise Operation mode 1: ODD load (Blue angel requirement)	4.4B / 29 dB(A)
Noise Operation mode 2: HDD load (Blue angel requirement)	3.8B / 22 dB(A)
Noise Operation mode 3: CPU 90% load (Blue angel requirement)	3.8B / 24 dB(A)
Noise Operation mode 4: High load	4.0B / 24 dB(A)
Noise Operation mode 5: Office applications	3.7B / 22 dB(A)
Idle mode (Blue Angel requirement)	3.7B / 21 dB(A)
Noise notes / description	A weighted sound power level Lwad (in B) / workplace related A-weighted sound pressure level LpAm (in dB(A)), Bystander position

Dimensions / Weight / Environmental

Dimensions (W x D x H)	203 x 390 x 392 mm
Operating position	Vertical
Weight	approx. 12 kg
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35℃

Compliance

Product	ESPRIMO P5645
Model	MI3W-D2981
Germany	Blauer Engel / Blue Angel GS optional
Europe	CE Nordic Swan in progress
USA/Canada	FCC Class B cCSAus
Global	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® 5.0 EPEAT® Silver
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Additional Software

Additional software (preinstalled)	Nero Essentials S (burning software)
Additional software (optional)	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™, only with Blu-ray Disc™ drive / Blu-ray playback is not supported under Windows XP if the system runs on Intel onboard graphics) Nero 9 Essentials XL

Miscellaneous

	Keyboard on (Special Fujitsu keyboard required) Thermal management

Compatibility (references)

	DMI 2.0
	PC 2001
	WMI 1.5
	USB 2.0
	SMBIOS

Manageability

Manageability features	DeskUpdate Driver management
	PXE 2.1 Boot code
	Wake up from S5 (off mode)
	Intrusion switch (optional)
	DASH 1.1 Support (optional)
Manageability type	DeskView 10.x client management including:
DeskView features	On/Offline remote client management
	Detailed system inventory management and reports
	BIOS Management
	Remote power management
	System notifications
	Advanced alerts (ASF implementation)
	Security Remote Control
	DeskView Helpdesk Integration
	WoL (Wake on LAN)
Manageability link	http://ts.fujitsu.com/manageability
	http://www.altiris.com/fujitsu

Security

Physical security	Kensington Lock support
	Eye for padlock
	Optional: Integrated cabinet lock
System security	Boot sector virus protection
	Write protect option for the Flash EPROM
	Embedded security (TPM 1.2)
	Control of all USB interfaces
	External USB ports can be disabled separately
	Control of external interfaces
User security	User and supervisor BIOS password
	SystemLock 2 BIOS SmartCard Security
	Hard disk password
	Optional: Access protection via external SmartCard reader
	Optional: Access protection via internal SmartCard reader

Serviceability

	FlexySlot
	EasyFix
	EasyChange for HDD
	EasyChange for optical drives

Packaging information

Packaging dimension	500x290x540 mm
Max. quantity / pallet	24
Material - Weight (g) Carton	1270 g
Material - Weight (g) EPS / PS	230 g
Material - Weight (g) PE	appr. 60 g
Packaging notes	printed user documentation is bleached in chlorine free process

Warranty

Standard Warranty	1 year
Service level	Bring-In / On-Site Service (depending on country)

Warranty

Maintenance and Support Services - the perfect extension

Recommended Service	5x9, Response Time: Next Business Day
Spare Parts availability	5 years
Service Weblink	http://ts.fujitsu.com/Supportservice

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More information

Fujitsu platform solutions

In addition to Fujitsu ESPRIMO P5645 E-Star5, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu ESPRIMO P5645 E-Star5, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
http://ts.fujitsu.com/ESPRIMO

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at http://www.fujitsu.com/global/about/environment/

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